

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/10295

**A. CLASSIFICATION OF SUBJECT MATTER**  
**IPC 7 C12P7/26 // (C12P7/26, C12R1:865), (C12P7/26, C12R1:74),  
(C12P7/26, C12R1:645), (C12P7/26, C12R1:15)**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
**IPC 7 C12P C12R**

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

**EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS, EMBASE, FSTA, CHEM ABS Data**

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WADA M ET AL: "Purification and characterization of monovalent cation-activated levodione reductase from <i>Corynebacterium aquaticum</i> M-13." <i>APPLIED AND ENVIRONMENTAL MICROBIOLOGY</i>, vol. 65, no. 10, October 1999 (1999-10), pages 4399-4403, XP002272891  ISSN: 0099-2240  abstract  page 4401, left-hand column, line 28  -right-hand column, line 5  table 3  ---</p>	7,8
Y	<p>EP 1 122 315 A (HOFFMANN LA ROCHE)  8 August 2001 (2001-08-08)  cited in the application  the whole document  example 5  ---</p>	1,2,9 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 March 2004	24/03/2004
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  van de Kamp, M

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP 1 074 630 A (HOFFMANN LA ROCHE) 7 February 2001 (2001-02-07) cited in the application the whole document table 1 page 7, line 36 ---	1,2,9
Y	EP 1 026 235 A (HOFFMANN LA ROCHE) 9 August 2000 (2000-08-09) cited in the application the whole document ---	7,8
Y	WANNER P ET AL: "Purification and characterization of two enone reductases from <i>Saccharomyces cerevisiae</i> " EUROPEAN JOURNAL OF BIOCHEMISTRY, vol. 255, no. 1, July 1998 (1998-07), pages 271-278, XP002202649 ISSN: 0014-2956 abstract table 3 page 275, left-hand column, line 7 -right-hand column, line 13 page 277, left-hand column, line 64 -right-hand column, line 12 ---	7,8
A	EP 0 982 406 A (HOFFMANN LA ROCHE) 1 March 2000 (2000-03-01) cited in the application the whole document ---	1,2,9
A	US 4 072 715 A (BOGUTH WALTER ET AL) 7 February 1978 (1978-02-07) column 1, line 7-43 examples 1-9 ---	1,2,9
A	YOSHISUMI A ET AL: "Cloning, sequence analysis, and expression in <i>Escherichia coli</i> of the gene encoding monovalent cation-activated levodione reductase from <i>Corynebacterium aquaticum</i> M-13." BIOSCIENCE, BIOTECHNOLOGY, AND BIOCHEMISTRY, vol. 65, no. 4, April 2001 (2001-04), pages 830-836, XP001160832 ISSN: 0916-8451 abstract ---	1,2,9

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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A	<p>STOTT K ET AL: "Old Yellow Enzyme: The discovery of multiple isozymes and a family of related proteins"  JOURNAL OF BIOLOGICAL CHEMISTRY,  vol. 268, no. 9,  25 March 1993 (1993-03-25), pages  6097-6106, XP002252405  ISSN: 0021-9258  abstract</p> <p>---</p>	
A	<p>NIINO Y S ET AL: "A new Old Yellow Enzyme of <i>Saccharomyces cerevisiae</i>"  JOURNAL OF BIOLOGICAL CHEMISTRY,  vol. 270, no. 5,  3 February 1995 (1995-02-03), pages  1983-1991, XP002252406  ISSN: 0021-9258  abstract</p> <p>---</p>	
A	<p>VAZ A D N ET AL: "Old Yellow Enzyme: Aromatization of cyclic enones and the mechanism of a novel dismutation reaction"  BIOCHEMISTRY,  vol. 34, no. 13, 1995, pages 4246-4256,  XP001164161  ISSN: 0006-2960  abstract</p> <p>---</p>	
P,X	<p>WADA M ET AL: "Production of a doubly chiral compound, (4R,6R)-4-hydroxy-2,2,6-trime thylcyclohexanone, by two-step enzymatic asymmetric reduction."  APPLIED AND ENVIRONMENTAL MICROBIOLOGY,  vol. 69, no. 2, February 2003 (2003-02),  pages 933-937, XP009011700  ISSN: 0099-2240  abstract  page 934, right-hand column, line 8-15  page 936, left-hand column, line 23-38</p> <p>---</p>	7,8
T	<p>KATAOKA M ET AL: "Old Yellow Enzyme from <i>Candida macedoniensis</i> catalyzes the stereospecific reduction of the C=C bond of ketoisophorone."  BIOSCIENCE, BIOTECHNOLOGY, AND  BIOCHEMISTRY,  vol. 66, no. 12, December 2002 (2002-12),  pages 2651-2657, XP009011699  ISSN: 0916-8451  abstract  page 2651, left-hand column, line 13  -right-hand column, line 10</p> <p>---</p>	

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